

# Pediatric Burns

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Burns are a devastating form of trauma. Burns are associated with high mortality rates, lengthy rehabilitation times, cosmetic disfigurement, and permanent physical disability. Having a good understanding of the consequences of burn injury and the appropriate prehospital management can reduce morbidity and mortality in this age group.

## Basic Life Support

1. Pediatric primary field survey.
2. Pediatric airway management.
3. Apply 100% oxygen by non-rebreather mask for potential inhalation injury. Consider early intubation if perioral burns or severe inhalation injury. Signs of inhalation injury:
  - Carbonaceous sputum
  - Singed nasal hairs
  - Tachypnea
4. Stop burning process. Remove jewelry and clothing.
5. If chemical is dry, brush off, then flush with copious water. If liquid, flush with copious water.
6. If eye involvement, flush continuously with normal saline during transport.
7. Apply clean, dry wound dressings and/or sheet to involved areas.

## Advanced Life Support

### THERMAL INJURY/CHEMICAL BURNS

1. Vascular access prn, IV or IO, NS. Parkland formula.  
Parkland formula =  $[\text{wt kg} \times \% \text{ burn} \times 4 \text{ ml/kg}] + \text{maintenance fluid needs}$ . Administer  $\frac{1}{2}$  over first 8 hours and remainder over next 16 hours. Run fluid wide open for major burns until exact fluid requirements calculated.  
Example: 10 kg child with 50% burn  $(10 \text{ kg} \times 50 \times 4 \text{ ml/kg}) = 2000 \text{ ml} = \text{resuscitation needs}$ .  
Maintenance needs =  $4 \text{ ml/kg/hr for } \leq 10 \text{ kg weight} = 4 \times 10 = 40 \text{ ml/hr} \times 24 \text{ hr} = 960 \text{ ml}$ .  
Total:  $\frac{2000 \text{ ml} + 960 \text{ ml}}{2} = \frac{2960}{2} = 1480$  in first 8 hr. = 185 ml/hr for first 8 hr.
2. Consider morphine if volume status and perfusion are adequate. Contact medical control for permission and dose.
3. Refer to Lund and Browder chart to estimate burn size (Appendix).

### ELECTRICAL BURNS

1. Cardiac monitor.
2. Vascular access prn, IV or IO, NS. Use Parkland Formula.
3. Treat dysrhythmia by appropriate protocol.
4. Consider Pain Management (see protocol).

## Key Points/Considerations

1. Use appropriate barrier precautions.
2. Contact with appropriate advisory agency may be necessary for hazardous materials, prior to decontamination or patient contact.
3. Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child. Transport immediately to receiving hospital.
4. Refer to Lund and Browder chart to estimate burn size (Appendix).
5. Consider Pain Management protocol.

Service Director Initials \_\_\_\_\_

Medical Director Initials \_\_\_\_\_

Date Approved By KBEMS \_\_\_\_\_

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